

REMARKS

Claims 1-20 are pending. Claims 1-14 have been amended for clarification purposes and new claims 15-20 have been added to recite additional features of Applicants' invention. In amending the original claims, the claim objections have been addressed. Also, the title has been replaced with one more descriptive of the invention as presently claimed.

Reconsideration of the application is respectfully requested for the following reasons.

In the Office Action, the Examiner rejected claims 1-14 under 35 USC § 102(b) for being anticipated by U.S. Patent No. 5,930,395 to Nagai. This rejection is respectfully traversed for the following reasons.

Claim 1 recites a method having two steps for encoding a picture signal. The first step includes partitioning picture information of one block group into respective information regions. The second step includes "forming a partition table having length information indicating a length of each of the information regions." (See, e.g., Figure 3 of Applicants' drawings). The Nagai patent does not disclose this second step.

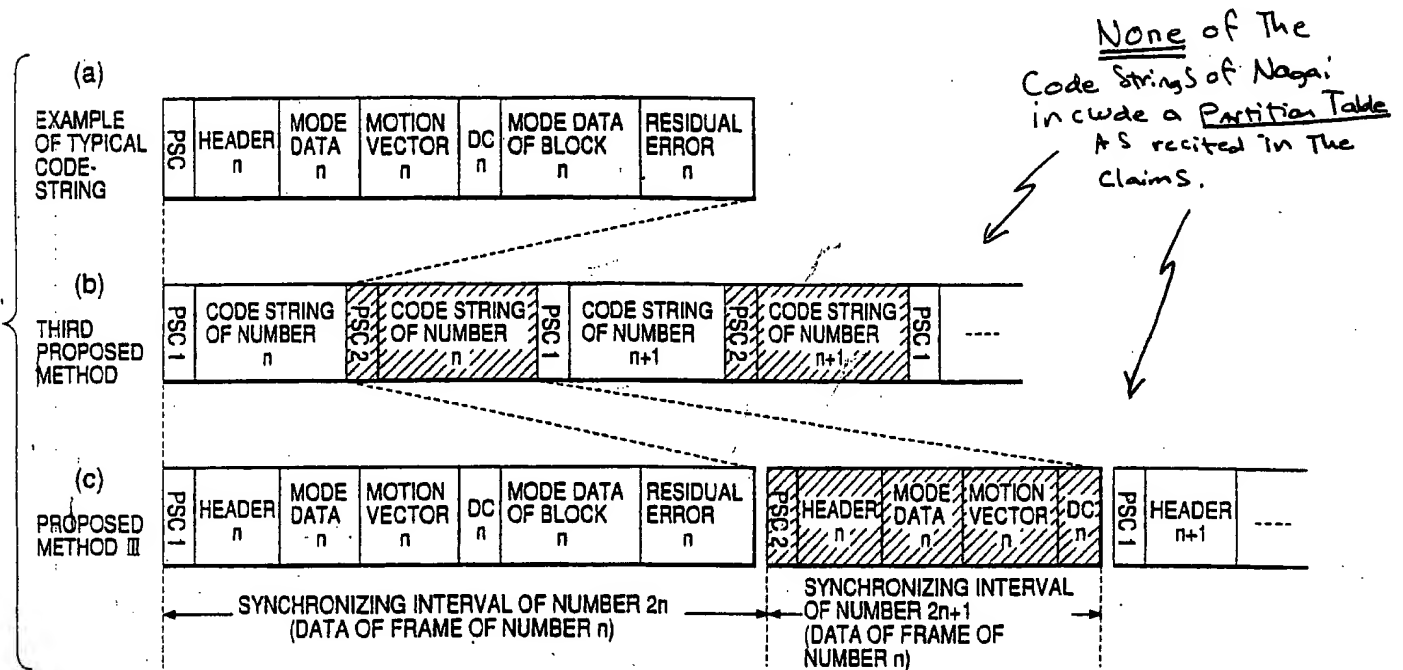
The Nagai patent discloses a system for encoding picture information. As shown in Figure 11, this system includes an encoder 21 which branches encoded picture information along two signal routes. The first signal route inputs the encoded picture information (called a basic code string S11) directly into a combiner 23. The second signal route selectively extracts information (e.g., a header field, motion vector field, etc.) from the basic code string to form an additional code string S12. The basic and additional code strings are then serially combined in combiner 23

and transmitted. The combined picture signal is shown in Figures 12(b) and 12(c), which were relied on by the Examiner in rejecting the claims.

None of the picture signals shown in Figures 12(b) and 12(c) include "a partition table having length information indicating a length of each of the information regions" as recited in claim 1. (Emphasis added). As shown, each picture signal of Nagai includes a basic code string appended to a front-end portion of an additional code string. The basic code string includes a leading synchronization indicator (PSC1) followed by header, mode data, motion vector, DC, mode data of block, and residual error information fields. The additional code string includes only selected ones of the information fields contained in the data field. For example, in Figure 12(c) only the header, mode data, motion vector, and DC fields are included in the additional string. (The purpose of the additional string is to provide redundancy that will allow the picture information to be retrieved in the case where a transmission error occurs in one or more of the fields in the basic string.)

Unlike the claimed invention, none of the basic or additional code strings in either of Figures 12(b) or 12(c) include a partition table which, for example, provides an indication of the lengths of the header field, motion vector field, and other information fields therein. Instead, Nagai only discloses appending a leading synchronization indicator PSC to each of these fields, which serves the purpose of separating code strings but which does not provide an indication of the length of each of the information fields partitioned within the code string.

Absent a disclosure of a partition table in any of its code strings, the Nagai patent cannot anticipate claim 1. Applicants further submit that the foregoing differences are sufficient to render claim 1 and its dependent claims non-obvious and thus patentable over Nagai.



Including a transition table of the type recited allows the claimed invention to achieve superior performance over many picture signal encoding systems previously proposed. For example, through the partition table "independent channel coding for each partitioned region is possible, that in turn permits provision of independent redundancy to each partitioned region, and

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prevents an error propagation over the partitioned region." (See page 11, lines 1-5). This independent channel coding allows for improved compression efficiency and resilience to error occurrence. None of these performance improvements can be attained through the system disclosed in the Nagai patent.

Claim 3 recites channel coding the information regions "in redundancies depending on an order of importance of the information regions indicated in the partition table." None of these features are disclosed in the Nagai patent.

Claim 4 recites performing the channel coding "with a greater amount of redundancy for an information region having a higher order of importance indicated in the partition table than for an information region having a lower order of importance." None of these features are disclosed in the Nagai patent.

Claim 6 recites "forming the partition table by converting a maximum length of each of the information regions into a number of bits." None of these features are disclosed in the Nagai patent.

Claim 7 recites "transmitting a partition table with the picture signal, said partition table including . . . length information indicating respective lengths of the header region, the motion vector region, and discrete cosine transform coefficient region." None of these features are disclosed in the Nagai patent.

Claim 9 that "the resynchronization marker is transmitted before the partition table." None of these features are disclosed in the Nagai patent.

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Claim 10 recites that "at least two of the header, motion vector, and discrete cosine transform coefficients regions are channel coded in redundancies different from one another." None of these features are disclosed in the Nagai patent.

Claim 11 recites that the "partition table includes information indicating an order of importance of the header region, the motion vector region, and the discrete cosine transform region and wherein redundancy in the channel coding is performed based on the order of importance indicated in the partition table." None of these features are disclosed in the Nagai patent.

Claim 12 recites that "the transmitting step includes transmitting the partition table the header region, the motion vector region, and the discrete cosine transform region in order." None of these features are disclosed in the Nagai patent.

Claim 13 recites (1) receiving a picture signal including information regions of a block group and a partition table having length information on the information regions, (2) analyzing the partition table to determine the length of each information region, and (3) decoding the partition regions according to the length information. None of these features are disclosed in the Nagai patent.

Claim 14 recites (1) receiving a picture signal including information regions of a block group and a partition table region having length information on the information regions, said information regions being channel coded in redundancies different from one another, (2) analyzing the partition table to determine the length information of the information regions, and (3) channel

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decoding the information regions according to the length information. None of these features are disclosed in the Nagai patent.

New claims 15-20 have been added to the application.

Claim 15 recites a method for encoding a picture signal, comprising "grouping picture information from a plurality of blocks into information regions; partitioning the regions; and forming a partition table which includes length information for each of the regions in the structure." The Nagai patent fails to disclose these steps.

The Nagai patent discloses a system which performs a moving-signal coding/decoding scheme for picture information. This scheme composes a coding string using three fields: a header field, motion vector field, and a DC field. However, Nagai does not group picture information from a plurality of blocks into respective information regions. (The claimed invention performs this function when, for example, the headers in 8 macro blocks forming the block group are all grouped together into the header region, the motion vectors in the 8 macro blocks are grouped together into the motion vector region, etc.) Nagai also does not disclose forming a partition table which includes length information for each of the grouped regions.

For at least these reasons, Applicants respectfully submit that claim 15 is patentably distinguishable from the Nagai patent.

Claims 16-20 recite additional features which are not disclosed in Nagai. It is therefore submitted that these claims are allowable, not only by virtue of their dependency from claim 15 but also based on the features separately recited therein.

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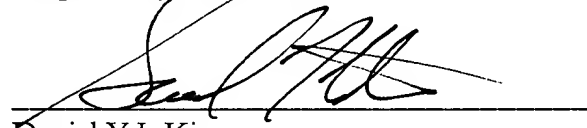
Reconsideration and withdrawal of all the rejections and objections made by the Examiner is hereby respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of the application is respectfully requested.

Should the Examiner believe that further amendments are necessary to place the application in condition for allowance, or if the Examiner believes that a personal interview would be advantageous in order to more expeditiously resolve any remaining issues, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with this application, including extension of time fees, to Deposit Account No. 16-0607 and credit any excess fees to the same Deposit Account.

Respectfully submitted,



Daniel Y.J. Kim
Registration No. 36,186

Samuel W. Ntiros
Registration No. 39,318

FLESHNER & KIM, LLP
P.O. Box 221200
Chantilly, Virginia 20153-1200
Telephone No: (703) 502-9440
Facsimile No: (703) 502-9596